Oeconomy in Brewing.

The Second Edition.

CONCISE INSTRUCTIONS FOR BREWING IN PRIVATE FAMILIES.

CALCULATED SOLELY FOR THE USE OF THOSE WHO ARE DESIROUS OF

Brewing their own Beer.

WHEREIN IS LAID DOWN THE METHOD OF OBTAINING IT FINE AND GOOD FLAVORED,

With every other uſeful Direction for

Private Brewing, Management of the Cellar,
&c. &c.

BY WM. PLOUGHMAN.

☞ It being the natural wiſh of moſt Families to Brew Beer for their own conſumption, and the Author having obſerved how very incompetent many are to the taſk, offers this Work for their Information, on an eaſy regular Syſtem, whereby all thoſe difficulties ſo generally encountered, will be done away, and every grand requiſite which conſtitutes good Beer, obtained with ſuch certainty, that it is particularly worthy the notice and attention of every maſter of a Family.

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C. 166

To The PUBLIC.

IN preſenting the FIRST *Edition of*
s Treatiſe to the Public, the Author might
ve been deemed preſuming in recommend-
it ſo warmly, as a Tract of general uti-
y,—but he feels himſelf particularly happy
aſſerting that it has been honored with the
ſt flattering reception; and ſanctioned by
e approbation of many reſpectable people,
ho have brewed and managed their beer
reeable to the plan therein laid down;
hich added to its very rapid ſale, has encou-
ged him to ſend forth a SECOND EDITION
full confidence from its being ſo particu-
rly adapted for the purpoſe, it will con-
nue to be an important aſſiſtant *to all who*
re deſirous of brewing their own beer and
ereby introducing into their families a fine
eaſant and wholeſome beverage.

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PREFACE

ALMOST every houſekeeper whoſe ſituation and convenience will permit, are deſirous of brewing their own beer, but the end of obtaining it good, is frequently defeated by the erroneous ſyſtem commonly purſued, I therefore have taken the liberty to offer this ſmall treatiſe to the public, being convinced of the great inconvenience that many families labour under for want of inſtructions to manage their brewing with ſucceſs. The many preſſing importunities of my friends tended likewiſe to haſten me to ſuch a meaſure. In conſequence I have given in as diſtinct and conciſe a manner as in my power, ſuch rules and directions as I truſt will compleatly anſwer the purpoſe of private brewers, and thereby do away that complexity with which they are ſo often bewildered. I have endeavoured through each proceſs to avoid as far as the nature of the work will permit, the technical phraſes uſed by brewers that the whole may be readily comprehended.

Whatever is advanced in the following pages are the practical obſervations of many years cloſe inveſtigation, therefore to every Maſter of a family, who is inclined to brew, I flatter myſelf it cannot but prove of infinite ſervice, for by adhering to theſe inſtructions, he will become his own brewer, and be enabled to conduct every proceſs with as much eaſe and certainty as can be done, without having recourſe to the Thermometer, which would moſt probably be generally conſidered too expenſive to be introduced for private brewing.

Should this fall into the hands of the

common brewer, he muſt not expect to find a treatiſe written for *his* guidance, the intent of the work being merely for private uſe; I have ſelected thoſe fundamental directions only, which can be of real ſervice to thoſe to whom it is addreſſed.

The mode of conducting a public brewery is widely different, and of a much more diffuſive nature, written inſtructions for the management of which will be ſent to any gentleman who is deſirous of information in the brewing ſcience, (or perſonal attendance, if requeſted, will be given) with correct tables for the application of the Thermometer, &c.

To the victualler who brews his own beer, the improved ſyſtem of brewing proves highly advantageous. The Author has inſtructed, and ſuperintended both the Common brewer and victualler, and can give reſpectable references that it anſwers equal to the moſt ſanguine expectation, the moſt eſteemed qualities being thereby obtained with great nicety, ſuch as *flavor ſpirituoſity*, and *beautiful tranſparency* in a *few days*.

The management of the cellar and mode of racking, &c. fully explained, which will be found equally ſerviceable in a confined as well as in an extenſive trade. Every application (if by letter, poſt paid) will be duly attended to.

INSTRUCTIONS
FOR
BREWING
IN
PRIVATE FAMILIES.

ON MASHING.

THE neceſſary and moſt particular precaution to be obſerved in this firſt proceſs of Brewing, is to obtain a heat proper for extracting the virtue of the malt.

The heat of the water (or to uſe the brewers phraſe, the liquor) ſhould be regulated in the maſh-vat, in ſuch a manner, as to prevent any injury to the delicate and more ſoluble parts of the malt, and yet to

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obtain every neceſſary property, for the future aſſiſtance of the brewer, in rendering the work compleat. There can reſt no doubt, but the frequent errors committed in this firſt ſtage of the buſineſs, is one principle cauſe why the beer, in private families, ſo often proves contrary to their expectation;---Either too high, or too low a heat, is prejudicial, though not equal in its effects; the former is of the utmoſt conſequence, whereas the latter, as far as regards extracting the contents of the malt, can be remedied in the ſucceeding maſhings.

Should the infuſion be made at too high a heat, the natural conſequence attending ſuch an error, will be, that of ſetting the goods or maſh, that is, from its violence, the ſweet of the malt will be in a great meaſure locked up, and retain with it, a conſiderable portion of the wort; therefore beſide falling ſhort of the intended quantity, the extract will be deprived of that ſtrength and quality which it ought to poſſeſs, and which expectation had formed, in conſideration of the quantity of malt allowed for the purpoſe; and it will be matter of great difficulty to obtain by the ſucceeding maſhings, the whole virtue of the malt; indeed after ſuch an error, I am of opinion, by the regular courſe of brewing, it cannot be perfectly extracted; hence a conſiderable loſs is (I might ſay) inſenſibly ſuſtained, and the ill qualities that abound in the beer, is frequently imputed to the malt which has been ſo injudiciouſly treated. I have often taken particular notice of the grains brought from private families, and by inveſtigation, have ſometimes found a conſiderable quantity of the valuable ſaccharine quality unextracted---it is obvious this muſt ariſe from the error above alluded to; or, otherwiſe by the application of too low a heat in the firſt maſh, and unſkilful or negligent treatment of the following maſhings. If the operation is performed when the water is below its proper heat, conſequently the extract will be imperfect, and of courſe, will be deficient in ſtrength &c. but though this firſt wort, may be intended for ſtrong beer, and a diſappointment ariſe from its not being of a quality proper for the purpoſe, yet by the ſecond and third maſhing, the whole of the rich and moſt eſteemed properties of the malt, might be compleatly drawn off. Thus no loſs will be ſuſtained, by a miſtake of this kind, as in the former, the only difference attending it, will be, that the ſecond and third extract, will be enriched in proportion, as the firſt is impoveriſhed; therefore in this inſtance, it would be acting with propriety, to mix the three worts together, as the firſt wort cannot prove good of itſelf.

It is in general the practice, after the water is emptied from the Copper, to let it remain in the maſh-vat till the ſteam is ſo far evaporated, that you can ſee your face in it. This mode certainly holds good, and will be a pretty near guide in cold clear weather, but yet it is then ſubject to the following objection. That the ſteam will ſometimes fly off before the water is ſufficiently cold, therefore in this caſe (and moreover if the wind be briſk and the brewery open,) it will be prudent, to let it remain ſome time after the reflection can be diſcovered in the water. But in cloſe, thick and rather warm weather, it is extremely liable to error, for then, and eſpecially if the brewhouſe is confined, the ſteam will not go off ſufficiently to judge with any degree of certainty, of the heat, and before the water would become clear, &c. agreeable to the above maxim, it would be too cold, to operate properly on the malt. Theſe precautions with what I ſhall farther advance on the ſubject, will, I hope, be found ſufficient, to conduct the private brewer as ſafe through this proceſs, as is poſſible, without making uſe of the

Thermometer. The moſt certain method to obtain a heat for the firſt maſh, is to mix a quantity of cold, to a given quantity of boiling water.

In mild weather I have found, that rather more than one Gallon of cold, to twelve Gallons of boiling water, to be a good proportion. Should the air be inclined to cold, one Gallon of cold, to about fourteen Gallons of boiling water, and if very cold, one to ſixteen Gallons will anſwer extremely well. There will no difficulty ariſe in acting agreeable to this plan; for by knowing the contents of the copper, the quantity of cold water to be added, is eaſily aſcertained. As ſoon as the boiling water is emptied into the maſh-vat, the cold water muſt be immediately mixed in, and the maſhing performed as expert as poſſible; taking care to ſaturate or wet every part of the malt. If the copper is not large enough to make a full maſh the firſt time it is heated, every means of diſpatch muſt be exerted, to get it hot again; and then directly turn into the maſh-vat, the quantity that is judged neceſſary for the length or quantity of Wort to be drawn off, ſtirring the maſh again, to well incorporate the whole.---This addition of water, may be applied ſomewhat warmer than the firſt, The maſh-vat ſhould now be covered cloſe with ſacks, or ſome other adventitious means, and remain two hours before it is let run. It is uſual to let it ſtand three hours, but the time already mentioned will be long enough to effect every beneficial purpoſe.

With reſpect to the heat of the water for the ſecond maſh, it does not require that particular attention to be paid to it as was neceſſary in the former, for if the maſhing has hitherto been well conducted, there can now ariſe no danger of injuring the malt. The method I would recommend for the ſecond maſh, is to let the water boil up well, and then throw into the copper a ſmall quantity of cold water, in proportion of one, to about twenty-five Gallons, and then by the time it is on the goods or maſh, it will be in general a good heat. It will be as well to cover this ſecond maſh cloſe, and as to the time of its ſtanding, that will be regulated by the boiling of the firſt wort, for after it has boiled long enough, and fit to ſtrain into the coolers, the ſecond wort of courſe muſt be ready to return into the copper.

The third maſh, is commonly made with cold water, and indeed it is not of ſuch material conſequence in my opinion, to occaſion the trouble and expence of heating the copper for the purpoſe. I grant that ſhould there be ſuſpicion that any part of the virtue of the malt remains unextracted, owing to the ill treatment of the preceeding maſhings, ſuch a meaſure of neceſſity muſt be purſued.---But on the other hand, if it has been well and ſkilfully conducted, there will nothing remain, but what the cold water will wholly extract. Some are of opinion that by ſprinkling the water over this third maſh, and permitting it to ſpend ſlowly by the tap, is the beſt mode. But the practice I recommend, is to ſtir it the ſame as the former maſhing, and after this is run off, if the brewing is to be purſued the next day, to put on the goods about as much as the copper might contain of cold water, well ſtirring it again, and then immediately as the ſmall beer is boiled off, return it into the copper for the next morning's maſhing.---Hence there can be but little reaſon to ſuſpect that any thing remains in the goods, that will in the leaſt tend to diminiſh the quality of the wort,

The malt which I recommend, is that which is inclining to pale, but ſound dried, this colour will anſwer either for ſtrong beer or ale, and is much better for the private brewer, than very high coloured or extreme pale malt, and when ordered from the malſter, inquiry ſhould be made, whether it is old or new, he intends ſending. If the malt be new, it ſhould ſtand two or three days after grinding, before it is brewed. If it be old, it will be right to have it ground on one day and brewed the next, as from its age it will be ſufficiently meliorated in the huſk, without allowing it to ſtand after it is broke, which would rather be an injury, than of ſervice to the old malt.---As to the grinding of malt, there are, as in every proceſs relative to brewing, various opinions, but I have ever obſerved, that having it ground moderately ſmall, anſwers the beſt purpoſe; I do not mean to a flour, as then it would clog the maſh, and of courſe in ſome meaſure impede the draining of the wort, but ſmall enough to do away the riſk of having any corns amongſt it unbroken, which frequently happens when particular orders are not given to have it ground rather ſmall, for thoſe entruſted to grind the malt, are ſometimes apt to hurry it through the mill, to diſpatch their work, without once conſidering the loſs that falls on the conſumer, owing perhaps to there being near one third of the malt untouched by the mill, this I have ſo freqently ſeen, that it induces me to entreat the private brewer always to be careful with reſpect to ordering his malt to be ground as already mentioned, rather ſmall than large.---Without doubt I ſhall be condemned by many in recommending malt to be ground ſmall, for the common idea with private brewers is, that it is the occaſion of thick beer.---But it may be depended on, that cauſes more remote lead to this tendency, and that ſmall ground malt has by no means any ſhare in producing this unpleaſant quality in the beer.---Malt nine or ten weeks old will be in as good ſtate for brewing as at any period whatever, and if it can be avoided ſhould not be uſed at a much earlier age.---If neceſſitated to brew very new malt, great care muſt be taken, not to apply the water too hot in the firſt maſh.---Some old malt mixed with the new is ſtrenuouſly recommended by ſome brewers: it will no doubt in ſome degree correct the violent propenſities of its nature as far as regards fermentation. Though this may be deemed a meaſure of neceſſity, and likely in the opinion of many, juſtifiable in this inſtance, yet the mixing of two malts together ſo diametrically oppoſite, cannot be congenial in obtaining a good guile of beer, and never ſhould be done but in caſes of the moſt urgent neceſſity, ſuch as when the new malt is juſt from the kiln, for it may be relied on that malt ten or twelve days old, will bring a guile of beer better to perfection itſelf, than by mixing with it a proportion of old malt.---The ſame rule likewiſe ſtands good for old malt, that it will act better of itſelf, than to have to depend on a partner for its ſucceſs.

The next matter that falls under our conſideration, is the water, which in conjunction with the malt, the extract is to be formed. The wild abſurd notions entertained by many brewers, regarding water fit for the purpoſes of brewing, is aſtoniſhing.---That ſuch incoherent opinions ſhould be prevalent amongſt private families cannot be matter of ſurprize, becauſe not underſtanding the buſineſs, they naturally adhere to the doctrine advanced by any one who ſtiles himſelf a proficient in the art, and not having ſufficient opportunity likewiſe for inveſtigation, are led on by the extravagant ideas of others, of as little judgement perhaps as themſelves.---There are many people who aſſert, that good beer cannot be obtained without water of the ſofteſt quality, but the brewer that entertains this idea, certainly leads one to imagine, he has had but little practice, or at any rate, if his practice has been of long duration, it is evident he muſt have ſpent but a ſmall proportion of his time in the reſearches of the principle of this proceſs, and no more than ſkimmed the ſurface of thoſe that follow.---In the courſe of my practice I have had every opportunity I could wiſh to inveſtigate the different qualities of water, and at the ſeveral breweries I have ſuperintended in different parts of the country, made my remarks on it, with as much care and preciſion as was in my power. I have brewed with water in a ſea-port town where it is notorious for the ill qualities with which it is ſaid to be impregnated, but never found any particular deficiency in the beer.---In a country brewery I once ſuperintended, I had an opportunity to try many experiments on hard and ſoft water. Having two pumps for the uſe of the brewery, one leading into a well, the water of which was extremely hard, and the other leading into a ſmall ſtream, that came from a large river, and which was eſteemed to poſſeſs every property deſirable for the purpoſe;---on repeated trials, I found by varying the extracting heat a few degrees, that the well water was capable of forming as good an extract as that of the river.---The worts from the hard, were ever of an equal ſtrength with thoſe worts from the river water; the fermentation of the one, was nearly the ſame as the other, otherwiſe than a few hours longer

was

was neceſſary to be allowed in this act, to the worts brewed with the river water. But the tranſparency of the beer from the hard, was evident over that of the ſoft water; and equally as ſoft and pleaſant. Theſe and many more experiments I have practiſed, ſuch as from pond water, and water which had its riſe from a ſpring running in the open air, in a very ſmall ſtream, a conſiderable diſtance before it reached the brewery, all of which as it is more immediately connected with the public, rather than the private brewer, I ſhall forbear troubling the reader with a long and particular account of.-----But which ſufficiently demonſtrates that there is neither difficulty nor danger in uſing hard water. As the thermometer is now getting into general uſe among public brewers, they have thereby a ſuperior advantage over the private brewer, becauſe in uſing hard or ſoft water, the heats can be applied with greater nicety than is poſſible to be done without its aſſiſtance. I do not mean from what I have here advanced, to aſſert that hard is ſuperior to ſoft water, for the purpoſe of brewing, my only deſire is to expunge the idea that any ill conſequences can enſue from it. I ſhould certainly recommend river water or a mixture of river and well water for the moſt part of the year, if it could be eaſily obtained, but few are ſo ſituated as to have a choice in their power, and indeed was I ſo circumſtanced that I could not obtain other than hard water, I ſhould reſt perfectly ſatisfied, not being under the leaſt apprehenſion, but I ſhould have good regular fermentations and excellent clear tranſparent beer, in any part of the country. I have to obſerve that in mentioning river water to be uſed the greater part of the year, that during the months of July, Auguſt, and September, is the ſeaſon in which it is not proper to be uſed, if it can be avoided, as from obſervation, I am convinced, it has a ſtronger tendency to acidity than well water, and the latter fining ſooner, is at this time of eſſential conſequence to the brewer.

The early inclination to acidity in river water is imagined to ariſe, in conſequence of the periſhing ſtate of the weeds, during the latter end of the ſummer, and thereby more readily communicating their nauſeous quality, to the water which paſſes over them, and which encouraging this tendency, renders it wholly unfit for the purpoſe of the brewer.

Rain water is highly extolled, as being ſuperior to every other for brewing.--There is not a doubt but it ſtands unrivalled for this, as well as for many other purpoſes of common uſe; but here without mature inveſtigation, an error of importance may be committed, for the difficulty of obtaining this water ſufficiently pure is ſuch, that I do not ſee how the obſtacle can generally be ſurmounted.——If it runs from houſes that are ſlated, &c. it is probably obtained tolerable free from adulteration, but that which runs from tiled roofs, owing chiefly to the vegetable ſubſtance, that forms ſo quick and in ſuch abundance thereon, imbibes ſuch a nauſeous and diſagreeable flavour in its paſſage, as muſt render it highly improper for this uſe.---By catching ſome and taſting it, as it is running from the roof, the impurity I allude to, will be diſtinctly perceived, as it will leave on the palate a kind of rank earthy flavor, ſomewhat bordering on muſtineſs.---Therefore the beſt method to be taken by people who are inclined to brew with rain water, is to be particular in keeping their roofs clean, as well as the ſpouts which convey the water into the ciſtern, this would be attended with a great deal of trouble, but is the only manner in which it can be obtained the moſt pure.---It likewiſe behoves the brewer who perſiſts in uſing ſuch water for brewing, to be very circumſpect in taſting it before committed to the copper, or an ill flavor may be inſinuated into the beer at this early ſtage, which no time or means will wholly eradicate.

OF BOILING,

IT will be unneceſſary to dwell long on this ſubject, it being the moſt ſimple and incomplex of any throughout the whole buſineſs. The ends ſought for, are thoſe of breaking the glutinous coherency of the wort, and extracting the valuable property of the hop.---Therefore it is obvious that the leading principle here, is nothing more than attention to the copper, in keeping the worts boiling as faſt as poſſible, during the time it is judged proper for them to be in that ſtate.---If the copper has no curve or any thing to hinder its boiling over, there ſhould be ſomething of the kind conſtructed, high enough to prevent any material danger ariſing from loſing any part of its contents; that which I would recommend, (and indeed which is now moſt frequently practiſed,) is a piece of ſheet lead about a foot deep or more, at the option of the proprietor, ſoldered to the copper all round, and ſupported with bricks or a curve of wood; thus when the copper is filled to the brim the addition being ſo much above it, there will be plenty of room to boil the worts properly, and the riſk of loſing any part of them through quick boiling will be totally done away. I have already obſerved that attention is requiſite in this proceſs, therefore it is ſcarcely worth while to make further comment on that point; in conſequence I have only to add, that the perſon who attends the copper, ſhould never leave it while boiling, for if an uniformity is not kept up, it is impoſſible to ſay how long it will take to accompliſh the intended purpoſe.

Many people are fond of boiling their worts a long time, but an error may be committed on this, as well as on the other ſide of the queſtion, for if it has received too much fire in the boiling, it will be ſo conſiderably condenſed, as very much to retard the introduction of a free fermentation. If the firſt wort is meant to be put away for ſtrong beer, without mixing any part of the ſecond with it, we muſt not of neceſſity regard the loſs of the fine rich flavor of the hop, the boiling muſt be purſued long enough to obtain a proper quantity of its preſervative principle, therefore if boiled as faſt as convenience will permit, for about three quarters of an hour, it will be found to be a proper time for this wort.

The ſecond wort will require a longer time for its ſeparation, it partaking of the oleaginous nature of the malt in a greater degree than the former:---one hour and a quarter or an hour and a half, will not be too long. For the third or ſmall wort, one hour's boiling will be ſufficient.

Should the firſt wort be intended to mix in with the ſecond, for ale, thirty minutes quick boiling will be full long enough.

The quantity of hops to be uſed for beer intended to be kept about ten or twelve months, ſhould be three quarters of a pound of the beſt kind, to every buſhel of malt.---If it is to be preſerved ſixteen or eighteen months, one pound to a buſhel, will be a juſt proportion. Such beer as is brewed for ale for preſent drinking and in cold weather, there need not be more than about ſix ounces to a buſhel.---And for this kind of beer brewed in warm weather, it will be neceſſary to apply half a pound to a buſhel.--But however it is here impoſſible to regulate the exact quantity that ſhould be uſed in all inſtances, this depending on various circumſtances, therefore the diſcretionary judgement of the perſon who brews, is called forth to apply ſuch a quantity as he might conceive moſt conducive to preſervation and flavor.

OF COOLING.

THAT the worts ſhould be cooled as quick as poſſible, at all ſeaſons of the year, is a ſubject that cannot admit of diſpute. In order therefore to do this with greater expedition, they ſhould not lay in the coolers more than three inches thick in the winter, and two inches thick in the ſummer, therefore care ſhould be taken to proportion the coolers to the quantity of malt generally uſed. It is of the utmoſt importance to have plenty of room for this purpoſe, as here errors very frequently have their riſe, and which are often of ſuch a nature, as the moſt ſkilful brewer can never after effectually remove.---Particular attention ſhould be paid to the coolers, (as well as every other utenſil,) that they be clean and ſweet. In ſome families where they have not the conveniency of large conſtructed coolers, tubs, &c. are uſed for the purpoſe, and ſuch are often taken from the cellar, or ſome other damp place, in a very foul or mildewed condition, ſhould this be the caſe, it is not merely cleaning them with hot water that is ſufficient; a ſmall quantity of lime ſhould be ſtrewed into each and filled, or partly ſo, with water, every now and then ſtirring it while it remains in them, which ſhould be at leaſt twenty-four hours before they are wanted, they then ſhould be well ſcalded, and be perfectly dry before the wort is run into them.---Admitting the coolers or any other of the utenſils be not in a foul ſtate if they have not been uſed for ſome time, it will be proper to uſe the above method, as it will eradicate any thing of a diſagreeable nature which they may have contracted in laying by.---The method of liming the utenſils is an old and long eſtabliſhed maxim, therefore many of my readers moſt likely have conſtantly uſed it; and to thoſe who have never made it their practice, I ſtrongly recommend it, eſpecially in the warmer ſeaſons.

The exact heat the worts are to be put together cannot poſſibly be aſcertained without the thermometer, nor is it ſo particularly neceſſary for the private brewer to be ſo very exact and nice in this point, as it is the duty of the common brewer to be, the latter frequently being obliged to ſend his beer out when but a ſew days old, whereas the former can allow without inconvenience, a reaſonable time for its coming round. In very cold weather, the wort ſhould feel quite warm when ſet to work. In milder weather, it ſhould feel rather warmer than the hand or finger, but if very hot weather, it cannot be brought too cold into the tun.

In the heat of ſummer if neceſſitated to brew, the maſhing ſhould be deferred till noon, the worts will then come off in the evening, and lay during the cool of the night. In the morning about ſun-riſe they ſhould be examined, and if found to be ſufficiently cold, ſhould be ſet to work immediately. If not, they may remain an hour or two; but it would be imprudent to let them remain longer, as the air would be getting warmer, and the worts in ſuch weather be liable to be (what the brewers term) foxed.

The quantity of yeſt neceſſary for the excitation of the fermentation is in proportion of one Quart of that which is freſh and ſteady to about Forty Gallons of ſtrong beer or ale, and one pint and a half to the ſame number of gallons of ſmall beer. If the weather ſhould prove extremely cold, rather more than the quantity mentioned may be applied,---and in very hot weather, it will be expedient to diminiſh the quantity. Immediately the yeſt is applied to the wort, it ſhould be ſtirred for the ſpace of two or three minutes to well incorporate the whole, and thereby cauſe in ſome degree an immediate fermentation

OF FERMENTATION,

And the Treatment the Beer ſhould receive after Tunning, &c. &c.

IT is neceſſary here to mention that the yeſt intended to be uſed ſhould be put at one time into the tun, there being an erroneous opinion prevalent with ſome people that the agency of the yeſt is moſt ſerviceable when applied by degrees at different ſtages of the fermentation.

In all my practice of near fifteen years inveſtigation of brewing, experiencing different methods to gain information in the buſineſs, I never could be led to believe that any ſervice could be rendered to a fermentation, in diſturbing it after being once properly and effectually ſet to work, indeed I have ever obſerved it to proceed beſt through every ſtage, and arrive more completely to perfection, when the yeſt has been applied all at one time, and the guile has remained totally undiſturbed till fit for tunning or cleanſing.

To be ſure if the working-tun ſhould be ſo ſituated, as to be affected by a ſudden change of weather, ſuch as from rather mild to extreme cold, it will then perhaps be neceſſary to add more yeſt, which muſt be ſtirred into the tun in the ſame manner as when firſt ſet to work.---Even after this it may be found proper repeatedly to beat in the head and ſtir it for two or three minutes together. This is a meaſure of neceſſity, to revive the ſpirit and life of the fermentation, after being ſo checked by the coldneſs of the weather, as to be in danger of never working properly in the caſks, after being tunned. However the quantity brewed in moſt private families, is not ſo conſiderable at one time, but the working-tun may be placed in a ſituation as not to be ſubject to ſuch inconvenience.---But wherever the tun may be placed it will be proper to keep it always covered cloſe, and thereby prevent as much as poſſible the eſcape of the fixed air generated by the fermentation.

To ſpeak with preciſion the number of hours the ſtrong beer fermentation will continue, is impoſſible, this depending on the weather and other circumſtances, therefore to work by time (as is the maxim with ſome brewers,) is exceedingly liable to error, for ſometimes the fermentation will be compleat in Forty or Fifty hours, and at other times exceed Sixty hours. The greateſt reliance that can be placed with regard to the period for cleanſing, is to pay attention to the head of the guile, and it will be obſerved after being ſometime in its moſt vigorous ſtate, to begin to turn rather of a brown yeſty nature, and by repeated attendance, it will be clearly perceived to get more denſe and diſcoloured, till the work is accompliſhed, which will be perfectly underſtood by its appearing of a thick yeſty conſiſtence, and juſt ready as it were to fall back into the beer,---it then ſhould be tunned immediately, as the head ſhould not be ſuffered to ſink, for then the ſpirit of the fermentation ceaſes, it will not work as it ought to do in the caſks, and an ill flavor moſt likely be imbibed by remaining beyond its proper time, therefore the private brewer would do well always to tun a few hours too ſoon, rather than one hour too late.

Strong beer brewed in ſmall quantities, and ale whatever the quantity may be, I would recommend to be tunned the ſecond day after brewing. And as for the ſmall beer, it will be moſt proper to tun it immediately it has fairly taken the yeſt, which will be eaſily ſeen by the white creamy looking head on its ſurface.

The caſks for cleanſing ſhould be perfectly clean and ſweet, and dry in the inſide, and the bung hole bored in the center of a ſtave at the bilge part of the caſk, as it is from thence it is to work and purge itſelf clean from the yeſt, and which cannot be effected in a proper manner, if the bung is made in any other part.

The method I ſhall recommend for working the beer after cleanſing is different from that in practice among private families, therefore it might appear to ſome rather inconvenient.---And though at firſt ſome little trouble and expence might attend it, yet eventually it will be found the eaſieſt and only ſure method to get the beer clean, fine and good flavoured.---The expence I allude to, is that of erecting what the brewers call a ſtilling, (an utenſil in the form of a long trough.) The brewers now in general have them made very large, and which is certainly neceſſary owing to their carrying their fermentations to an exceſſive height.---But a ſtilling that will anſwer the purpoſe of a private family, may be made about ten or twelve inches deep, and twelve or fourteen inches wide in the clear, and the length in proportion to the number of Caſks that there may be occaſion to work on it at one time. If it is made of any conſiderable length, it will be proper to put two or three iron braces acroſs to render the ſtilling ſteady, and prevent its ſpreading, theſe ſhould be ſomewhat concavous, that the caſks may roll along pleaſantly. As much attention muſt be paid to the cloſing the joints of the ſtilling, as the coolers, unleſs lead be uſed for the ſtilling, which I by all means would recommend. The coolers cannot conveniently be leaded, becauſe then the heat of the wort would bliſter them, conſequently they would be rendered uneven, The ſtilling ſhould have a cork-hole bored through the bottom near one end, and be placed juſt high enough to draw from under it with a bowl-diſh or ſome thing of that kind. The deſcent of courſe rather inclining towards the end from which the beer is drawn.

The caſks for the purpoſe being put upon the ſtilling, are then to be filled from the tun, and placed ſufficiently inclining for the yeſt to work down one ſide of them. Some common brewers, indeed place the caſks exactly upright, the yeſt working down on either ſide, but this is merely matter of opinion, however it is obvious the former is the cleaneſt mode. If the beer works briſk, it ſhould be conſtantly filled up once an hour at leaſt, for the firſt ſix or eight hours after being tunned, in that time it will probably in ſome degree ſubſide, therefore leſs attention may be paid to filling up, only taking care always to keep the caſks filled till the fermentation has entirely ceaſed, which if the whole has been well conducted, will be in a few days. If the beer in the ſtilling ſhould be getting very thick, it will be proper in the evening to draw it all out, and turn it into a tub or one of the coolers to pitch, in ten or twelve hours, if not laid too thick, it will become tolerably fine, and by keeping a ſucceſſion of it, ſettled or pitched in this manner, the beer on the ſtilling may be filled up with it till compleatly worked off. I have thought it proper to throw out a hint of this kind, becauſe in any mode of working, if the beer is filled from time to time with that which is very thick, ſuch a quantity of yeſt is thereby introduced into the beer as will at any rate prevent its becoming fine, and often occaſion a continual fretting, the forerunner of acidity and ill flavor.

I truſt after an impartial trial, the private brewer will find that working agreeable to theſe rules is the eaſieſt and moſt eligable plan of any yet recommended for his guidance, and where the conſumption of the family is conſiderable, the expence of purchaſing a ſtilling, will very ſoon be repaid by a prevention of that waſte inſeperably attending other methods of working.

In ſome families moſt likely it might not be thought worth while to provide a ſtilling, in this caſe the beſt way to proceed will be to place a ſmall tub on a ſtand, with a cork hole bored through the bottom, and acroſs the tub lay a kind of frame of ſticks, and on theſe place the caſk to be filled, working it in the ſame manner as on the ſtilling.---This will anſwer very well for diminutive lengths, but where it is neceſſary to brew frequently and in large quantities, it will be too unwieldly to be adopted.

The beer being well managed on the ſtilling and compleatly worked off, it will then be proper to remove it to the place where it is to remain till drank, as ſoon as it is ſtanded, the bung is to be drawed and the caſks filled up quite full, with fine beer, ſkimming off the head from time to time, that will ariſe in conſequence of its being rolled over. After being attended in this manner for two or three days, about three quarts (if Hogſhead Caſks, and others in proportion,) ſhould be drawn from each caſk, and then about two quarts of freſh boiled hops run as dry as poſſible, put into the beer, the caſks ſhould then be bunged tight, and a hole bored with a gimlet near the bung for the vent peg, which ſhould be left rather ſlack a day or two, and if the beer is obſerved to fret, or, owing to the ſwelling of the hops, the caſk is ſo full as to run out at the vent, it will be neceſſary to draw off two or three pints more of the beer. If after this, it is found to be quiet and free from fretting, the peg may be beat in tight, and there will be no more attention required than to examine it every now and then during the firſt two or three weeks, being careful if it is again inclined to ferment, to draw off a proper quantity as a prevention, though if matters has been well conducted, this is not likely to be the caſe, unleſs the caſks are too full, an error which ſhould be particularly guarded againſt.

Ale brewed for preſent drinking, is ſometimes wanted in ſuch a hurry, as not to allow it ſufficient time to get fine, therefore in this inſtance as well as in every other, where it is imagined to be neceſſary, the following proportion of finings may be uſed. To a Caſk containing ſixty Gallons, one ounce of the beſt iſinglaſs picked ſmall and laid to ſteep in two quarts of ſtale beer or cyder, ſtirring it two or three times a day till it is diſſolved, which will be in a few days, it then muſt be well whiſked, with a ſmall whiſk made of broom or oſier twigs, and if found quite diſſolved, it is to be applied to the beer immediately, the caſk ſhould be inſtantly bunged up, and rolled over three or four times, then place it where it is to remain and give it vent.

This treatment will anſwer extremely well, if the beer has been well brewed; but if it has been improperly managed, the finings will not prove effectual.

It frequently happens in private brewing that the ſtrong beer gets too ſtale to be pleaſant drinking, and many are the methods preſcribed to bring it about, but the only effectual way is to brew an equal quantity of new beer and mix in with the old. Hop and fine it down as directed above, and in a few weeks it will be excellent good beer. Many families are prone to lay in and keep a ſucceſſion of their ſtock of beer from March, but I would adviſe the ſucceſſion of ſtrong beer to be kept up from the month of October or beginning of November.--The ſtock of ale may be brewed in March or April, indeed ale or ſmall beer will anſwer very well, brewed at any time, except in extreme hot weather, when it would be prudent to defer brewing without abſolute neceſſity requires it.

FINIS.

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